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SUBJECT GROUP 9470-9499 COUNTERMEASURES

SUBGROUP 9475 - DEGAUSSING

9475.1 Magnetic Silencing Services Available at Norfolk, Virginia

a. Definition. Magnetic Silencing is the general term applicable to the reduction of a ship's magnetic field (induced and permanent) by means of both the ship's installation (degaussing coils) and supplementary external means (deperming treatment). Deperming is the specific treatment of a ship by powerful magnetic fields from external sources of electric current so as to remove and stabilize, insofar as practicable, the "permanent" magnetic characteristics taken on a ship while moored on an unchanged heading during construction, modification, and major repair and overhaul periods.

b. Available Facilities. Magnetic Silencing Facility, Norfolk consists of two operational activities and a central office for scheduling and liaison. The activities are the Degaussing Range at NAVSTA Norfolk and the Deperming Station located off Lambert's Point. The scheduling, administration, and liaison functions are provided by the central office at Building Q-57, NAVSTA Norfolk.

c. Regulations. OPNAV Instruction C8950.2 series prescribes the checking of ships' degaussing effectiveness at periodic intervals as specified in the degaussing instruction found in the ships' degaussing folder. Instructions also prescribe a degaussing check for the following:

- (1) Before and after a major dry-docking period.
- (2) After a major shock to the hull from a nearby explosion.
- (3) After grounding or collision.
- (4) As feasible, before entering mined waters.
- (5) Before Casualty Corrected (CASCOR) of any Casualty Report (CASREP) degaussing equipment.
- (6) At every opportunity, when entering or leaving a port with ranging facilities. Declining use of range facilities is not an option.

d. Instructions. Accomplishing a complete check of a ship's degaussing condition requires ships to make satisfactory range runs on reciprocal headings within a six-week period. Check ranging is required a minimum of every six months when homeported where ranging services are available. Ranging is required upon entering or leaving the port during normal ranging hours. Ships must make their own arrangements via logistics request to NAVSTA Norfolk Port Operations

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for tugs if required for turning. The average length of time required for making a complete check is less than 2 hours, with an additional 30 minutes required when new degaussing charts are issued. Ships operating in and out of the harbor are required to range for degaussing coincident with their normal operations provided the range crossings are made during normal working hours.

e. Deficiencies. A ship's magnetic condition may be unsatisfactory or require improvement for any of the following reasons:

(1) Degaussing system defective due to mechanical or electrical defects or improper calibration of the degaussing ammeters.

(2) Using improper current values, wrong polarities set for locale, degaussing coils not energized or failure to communicate ammeter readings while on range heading.

(3) Changes in the ship's permanent magnetism, necessitating shipboard technical assistance, calibration, and a revised set of degaussing charts, and in some cases the requirement for deperming.

f. Deperming Requirements. The necessity for deperming a ship is ordinarily determined by first making check runs over a Degaussing Range. New ships are required to undergo deperming.

g. Services. The services of the Deperming Station are provided Monday-Friday, national holidays excepted. Detailed advance instructions are issued to ships scheduled for deperming. Additionally, a thorough, onboard brief by the Deperming Officer and civilian technical personnel is conducted in the weeks preceding deperming.

h. Hours of Operation. For planning purposes, an estimate of daylight working hours normally required for deperming operations is as follows:

Class	Working Hours (0700-1600)	Days **Scheduled**
Small craft	8-12	2
Auxiliaries	16-24	3
Large AOs	24-32	4
CVNs and LHAs	40-48	5
FFG, DD963, DDG51	16-32	3

NOTE: The first ship of a new class may require up to 16 additional daylight working hours.

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* Overtime must be scheduled in advance certifying operational necessity.

** Days scheduled are full workdays at the station. Underway is anticipated the following morning.

Tentative appointments for deperming may be made, if desired, pending a degaussing check at the range, which will determine the actual need for deperming. Time for running the degaussing range is not included in the length of time listed above. Complete degaussing calibration charts for ships are issued by the Deperming Station.

i. Inspection Arrangements. Electrical inspection of degaussing systems can be obtained upon application (through normal channels) to any naval shipyard and on a limited basis from Magnetic Silencing Facility (MSF) technicians. Repairs (including the calibration of ammeters, which must be done in place onboard ship) should be completed before ranging or deperming. MSF personnel should check the ship's degaussing folder for deficiencies.

9475.2 Scheduled Procedures. Routine degaussing range checks in the course of normal operations will be provided upon request to the degaussing range, subject to prior commitments for degaussing checks.

a. Arrangements. Prior arrangements to run the degaussing range may be made by contacting the MSF Head Engineer or Range Operator, NAVSTA Norfolk during regular working hours and by contacting the Port Operations Duty Officer, NAVSTA Norfolk outside of regular working hours.

b. Scheduling. Naval ships may schedule range runs by logistics request message to:

NAVSTA NORFOLK VA//PM PORT OPS/N3//.

Include details in logistics request paragraph Delta or Zulu.

c. Degaussing Scheduling Requirement. Ships should be scheduled in advance when a complete check is to be accomplished.

d. Deperming Scheduling Requirement. Arrangements for deperming must be made as far in advance as practicable. Squadrons or type commanders should initiate the request for deperming to MSF Head Engineer to establish an available time period. This schedule is then introduced into the CINCLANTFLT Quarterly Employment Schedule. Emergency or exceptionally unusual situations requiring short-time notice (two weeks) can be handled on a time available basis. Arrangements for tugs and pilots must be made by logistics request to Regional Port Operations, NAVSTA Norfolk.

9475.3 Normal Hours of Operation. Normal hours for the Degaussing Range are Monday-Friday, 0730-1600 (closed holidays).

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a. After Working Hours. Degaussing Range runs outside of normal hours are provided for INSURV inspections (normally one heading only), visiting ships homeported in areas other than Hampton Roads, and ships with unsatisfactory degaussed condition, requiring ranging to upgrade to a satisfactory condition. Requests for such services are made through the ship's type commander by LOGREQ to Regional Port Operations Officer, NAVSTA Norfolk or to the MSF. It is requested that commands exercising scheduling and operational control of vessels requiring degaussing services arrange for these services to be performed during the normal work periods of the degaussing range unless emergent or urgent conditions render such scheduling impracticable.

9475.4 General Instructions for Degaussing Range Checks

a. Before starting check run, contact the Degaussing Range at NAVSTA Norfolk. Primary communications is by voice radio on 356.2 MHz. Request ship contact Degaussing Range approximately one-half hour before making check run. Visual call sign is "HOTEL SIXTEEN" (H16), Marine band radio channel 13 is also monitored.

b. The Degaussing Range requires the below listed information by radio in the following format:

(1) Coil settings - Once ship is on course, and before the ship crosses the range, inform the facility of actual ammeter currents and polarities. Ensure that meter readings are correct for both zone and polarity.

(2) Ship's draft - Forward and aft drafts (actual keel drafts, not navigational drafts).

(3) Ship's heading - if more than five degrees off channel course. Once course is established, maintain steady course and constant speed (between 8-10 knots or as range operator directs) while crossing the range.

c. Instructions for obtaining an accurate degaussing check in minimum time are:

(1) Check meter readings, making certain the settings are correct for zone and polarity. A run with improper settings or polarity will result in an unsatisfactory range run.

(2) Keep ship on a steady course; a constant speed of 8-10 knots is recommended but is considered ship's discretion. Make crossing about mid-channel or as range operator directs. (This is not to be interpreted as conflicting with general or special navigation or channel traffic regulations.)

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(3) For best results ensure range is clear of other shipping (including tugs) prior to crossing to avoid magnetic field interference.

(4) A minimum of two satisfactory runs (northeast and southwest) within six weeks, is required for a complete degaussing check. Ships are required to run the Degaussing Range during normal operating hours at EVERY available opportunity.

(5) Ships will be informed when runs are completed, if the check is "satisfactory" the range will advise. If further action is required the Degaussing Range will send an appropriate message consistent with security regulations on degaussing. If ship's degaussing charts require revision a message will be sent requesting the ship's degaussing folder (and all extra degaussing charts) be delivered to the Degaussing Range. Ships must have their degaussing folder onboard before leaving area. If deperming is required see Article 9475.6 below.

9475.5 General Instructions for Minesweeper Range Checks

a. The minesweeper ranging facility is located at the Degaussing Range. The range is equipped with magnetic sensors at a 30' depth for use by MCM and MHC class minesweepers and similar classes of vessels with low magnetic fields. Other small craft, such as LCUs, can be ranged as required.

b. Degaussing checks on these ranges are by appointment only. Instructions for running the range can be obtained upon arrival from the MSF Head Engineer or range operator. Primary communication is by voice radio on 356.2 MHz. Visual call is "HOTEL SIXTEEN" (H16). Marine band radio channel 13 is also monitored.

c. For planning purposes, estimated time for calibration of above-mentioned minesweepers is one-five days.

A degaussing range check ordinarily can be made in about half a day. Additional time is needed if re-calibration is required. The time necessary for recalibration is dependent upon the ship's magnetic condition.

NOTE: Calm water is required for use of this range.

9475.6 General Instructions for Deperming

a. The Deperming Station is located in 36-52-05N, 76-20-00W, approximately 1 mile south of Craney Island. The primary deperming slip, located on the east side of the Deperming Station, can accommodate CVN class aircraft carriers and all classes of steel hull surface ships. A smaller deperm slip west of the primary deperming slip accommodates LCUs.

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b. Primary communication is voice radio on 356.2 MHz. Visual call is "HOTEL TWENTY" (H20). Marine band radio channel 13 is also monitored.

c. Personnel from ship's complement are required to handle mooring lines on the Deperming Station catwalks when entering and leaving the Station.

d. Chronometers, navigation watches, magnetic compasses, flinders bars, and quadrantal spheres must be removed from the ship in order to avoid being adversely effected by the deperming process. Ordinary watches and clocks may be left onboard, but must be kept at least 10 feet away from the ship's hull and 10 feet below the weather deck. (More detailed instructions are available in NSTM S9086-QN-STM-010/CH-475 MAGNETIC SILENCING).

e. No services other than deperming will be furnished while the ship is at the Deperming Station. No stores, fuel or water is to be received or discharged. No fishing is permitted at any time, and no trash or debris may be thrown overboard in the Deperming Slip.

f. The Deperming Station is not equipped to furnish boat shuttle launches. Boats cannot be allowed in the slip during the rigging/unrigging or treatment processes. Commercial launch services may be hired.

g. Ships scheduled for deperming will be furnished special instructions for mooring, operation of degaussing equipment, and size of working parties. These instructions vary according to type and size of ship.